

IN THE CLAIMS:

1. (Currently Amended) A method comprising:
providing error data that indicate motion in an image;
representing error data as a collection of ordered bits; and
coding the bits by determining whether a given bit is equal to zero and if not, coding the bit based on whether its coefficient is positive or negative;
if the bit is equal to zero, determining whether the bit is zerotree root and if not, coding the bit based on whether the absolute value of its coefficient is less than or equal to a threshold value; and
if the bit has a coefficient of the form of a zerotree root, determining whether the coefficient is less than the threshold value or if not, coding the bit one way and if so, coding the bit depending on whether or not the magnitude of all the descendents of the coefficient are less than the threshold value.~~of each order to indicate zerotree roots that are associated with the order;~~
~~performing wavelet transformations on said image with error data to provide wavelet coefficients for a wavelet transformed error image; and~~
~~in a single pass, embedding zerotree coding of the wavelet transformed error image while encoding insignificant wavelet coefficients in the course of initial passes.~~
2. (Original) The method of claim 1, wherein the act of coding the bits comprises:
determining which of the bits indicate zeros; and
classifying each zero as either an isolated zero or a zerotree root.
3. (Original) The method of claim 2, wherein some of the error data are descendants of some of the other error data, and wherein the act of determining comprises:
traversing a descendant tree from a bit associated with one of said some of the error data to bits associated with said other error data to locate the zerotree roots.
4. (Original) The method of claim 1 wherein providing error data includes taking the difference between two successive image representations in an image sequence.

5. (Original) The method of claim 4 wherein taking the difference includes taking the difference of two successive discrete wavelet transform coded frames.

6. (Original) The method of claim 1 including coding said bits based on whether or not the data exceeds a predetermined threshold value.

7. (Previously Presented) An article comprising a storage medium readable by a processor-based system, the storage medium storing instructions to enable a processor to:

provide error data that indicate motion in an image;

represent error data as a collection of ordered bits;

code the bits by determining whether a given bit is equal to zero and if not, code the bit based on whether its coefficient is positive or negative;

if the bit is equal to zero, determine whether the bit is zerotree root and if not, code the bit based on whether the absolute value of its coefficient is less than or equal to a threshold value; and

if the bit has a coefficient of the form of a zerotree root, determine whether the coefficient is less than the threshold value or if not, code the bit one way and if so, coding the bit depending on whether or not the magnitude of all the descendents of the coefficient are less than the threshold value.~~of each order to indicate zerotree roots that are associated with the order;~~

~~performing wavelet transformations on said image with error data to provide wavelet coefficients for a wavelet transformed error image; and~~

~~in a single pass, embedding zerotree coding of the wavelet transformed error image while encoding insignificant wavelet coefficients in the course of initial passes.~~

8. (Previously Presented) The article of claim 7, the storage medium comprising instructions to enable the processor to:

determine which of the bits indicate zeros; and

classify each zero as either an isolated zero or a zerotree root.

9. (Original) The article of claim 8 wherein some of the error signals are descendants of some of the other error signals, the storage medium comprising instructions to enable the processor to:

traverse a descendant tree from a bit associated with one of said some of the error data to bits associated with said other error data to locate the zerotree roots.

10. (Original) The article of claim 7 wherein the storage medium comprising instructions to enable the processor to provide error data by taking the difference between the successive image representations in an image sequence.

11. (Original) The article of claim 10, the storage medium comprising instructions to enable the processor to take the difference of two successive discrete wavelet transform coded frames.

12. (Original) The article of claim 7, the storage medium comprising instructions to enable the processor to code the bits based on whether or not the data exceeds a predetermined threshold.

13. (Previously Presented) A system comprising:
a device to generate error frames by differencing two successive frames and to represent the error frames as a collection of ordered bits; and
an element to code the bits by determining whether a given bit is equal to zero and if not, coding the bit based on whether its coefficient is positive or negative, if the bit is equal to zero, determining whether the bit is zerotree root and if not, coding the bit based on whether the absolute value of its coefficient is less than or equal to a threshold value, and if the bit has a coefficient of the form of a zerotree root, determining whether the coefficient is less than the threshold value or if not, coding the bit one way and if so, coding the bit depending on whether or not the magnitude of all the descendents of the coefficient are less than the threshold value.~~of each order to indicate zerotree roots that are associated with the order, perform wavelet transformation on said image with error data to provide wavelet coefficients for a wavelet transformed error image, and in a single pass, embed zerotree coding of the wavelet transformed error image while encoding insignificant wavelet coefficients in the course of initial passes;~~

14. (Original) The system of claim 13 wherein said device includes a processor and a storage medium storing instructions to enable the processor to provide error data that indicate

motion in the image, represent the error data as a collection of ordered bits, and encode the bits of each order to indicate zerotree roots that are associated with the order.

Concl

15. (Original) The system of claim 13 wherein said device codes said bits based on whether or not the data exceeds a predetermined threshold value.
